Professional Development Module
Facilitator's Guide

Title: Mindsets

Targeted Audience: 6-12 Math Teachers

Description: This module is an introduction to Dweck's work of Mindset. It focuses on how a growth mindset can improve student learning specifically in mathematics. It additionally studies the revision of teacher feedback to a growth mindset for students.

Outcomes and Success Indicators

Outcome #1 Participants understand the characteristics of a growth and fixed mindset.
Success Indicator: I can explain the characteristics of a growth and fixed mindset.

Outcome #2 Participants understand how mindset impacts student learning.
Success Indicator: I can identify and discuss the impact of growth mindset on student learning.

Outcome #3 Participants adapt instructional practices (feedback) to promote growth mindset.
Success Indicator: I can analyze, reflect on and revise the feedback I give students to promote a growth mindset.

Time Frame: 3 hours

Agenda:

Minutes	**Activity and Procedure for the Activity**	Materials (List everything that would be necessary to facilitate this PD module.)
20	**<u>Welcome, Introductions, Icebreaker Review Outcomes and Agenda</u>** ● Hand out Geoboard template (2 copies) to each participant. ● Icebreaker: Situation 1: Find all 8 ways to divide a geoboard (5x5) in half in 2 minutes. (fixed)	Mindset Slides PD ND (for entire session) Geoboard template (need 2) Solution to Situation 1 (not needed for PD)

	Situation 2: Find a triangle with an area of 6 square units. Push yourself to find as many as possible. (growth) ● Debrief: Compare your feelings on task one and task two. How do the expectations of the tasks change your anxiety levels? Share your thoughts with a shoulder partner. Facilitator note: The icebreaker (situation 1 & 2) is designed to create a math problem solving situation with a growth vs. fixed mindset. Solutions provided but not necessary to have copies for participants.	
35	**Activity #1** ● Mindsets Inventory (page 3 for participants). Participants will identify where they are on the continuum of fixed vs. growth mindset. Participants take inventory and score it for themselves. ● Show scoring bands for fixed/growth mindsets (Scoring Guide) ● Video " Growth vs. Fixed Mindset": https://www.youtube.com/watch?v=brpkjT9m2Oo ● Review & discuss the summary then distribute the Growth vs Fixed handout ● Personal reflection: What questions surprised you? What did you learn? What did you discover about yourself through this inventory? (Reflection form)	MindsetAssessmentProfile - Inventory (page 3) Scoring Guide (page 4) Growth vs Fixed handout Reflection form(top ½ of page)
60	**Activity #2:** ● We will be using the website: https://www.youcubed.org/think-it-up/ ● Begin by having all participants read #3 "When You Believe in Yourself, Your Brain Operates Differently" and summarize the key points. ● Discuss and model as a group how we would summarize the information using the attached template – Think It Up Reflection Template(2 copies each) ● Divide the group into the 8 remaining sections (If necessary you may select sections which best fit your group instead of doing all sections.) ● Give each group 15 minutes to read and summarize their section using the template on big paper. ● Give each group 2 minutes to present their summary. Whole group share-out ● Watch the video to summarize the learning: https://www.youtube.com/watch?v=QVFYPb9QyRI	Think It Up Reflection Template (2) Big paper, markers, tape (laptops & internet access)
50	**Activity #3: Transforming Feedback** ● Introduction: Read vignette about Elizabeth, the gymnast from the PowerPoint. What would you say to Elizabeth if you were her parent? Write your choice on a sticky note and keep it for the end of the session. ● With a partner sort the Feedback statements cards (print & cut for partners to sort) into growth or fixed mindset on the Feedback Graphic Organizer.	Sticky note Feedback Statement Cards Feedback Graphic Organizer Feedback Statements Solutions - Improvement Growth mindset Framing

	● Review answers with your partner(Feedback Statements Solutions - Improvement) considering the following questions: ○ Which statements did you identify correctly? ○ Which statements surprise you? ○ Revise the statements that are fixed mindset to growth mindset ● Debrief ● Give handout: Growth mindset framing & Growth mindset feedback as resources. ● Revisit Elizabeth as a whole group, referring back to your sticky note. Which are fixed/growth mindset? Note: Growth is #5. Revise this growth statement	Growth mindset Feedback Note: This portion of the module would only be used in a 3 hour format. (Activity 3)
10	**Reflection, Wrap-up & Evaluation** ● How has your thinking shifted as a result of what you've learned about growth mindset? How might this affect your classroom environment and the feedback you give students?	Final Reflection Form (bottom ½ of page see Activity 1 Folder)

Tools to take back

Videos

https://www.youtube.com/watch?v=DKM6QwQpe3g
https://www.youtube.com/watch?v=NWv1VdDeoRY

Readings

Book: Mindset: The New Psychology of Success (Carol Dweck, 2006)
Book: What's Math Got to Do With It? (Jo Boaler, 2009; 2015)
Book: The Straight-A Conspiracy (Hunter Maats and Katie O'Brien, 2012)
Article: Mindset in Math/Science Achievement
Article: Why Change http://joboaler.com/pub/14_Boaler_FORUM_55_1_web.pdf
Article: The Effort Effect https://alumni.stanford.edu/get/page/magazine/article/?article_id=32124

Website

https://www.mindsetworks.com/
https://classteaching.wordpress.com/2013/04/07/developing-a-growth-mindset/

Graphic

http://www.coetail.com/wayfaringpath/files/2014/12/Growth-v-Fixed-Final.pdf

Related math activity

Rich Task: Jo's Favorite Tile Pattern http://www.wismath.org/Resources/Documents/Annual%20Conference/PreCon-JBoaler-Handouts.pdf